CLAIMS

1. A retardation film comprised of a single oriented polymer film, characterized in that the retardation at wavelengths of 450 nm and 550 nm satisfies the following formulae (1) and/or (2), and the water absorption is no greater than 1%:

$$R(450)/R(550) < 1 \qquad (1)$$
$$K(450)/K(550) < 1 \qquad (2)$$

where $R(450)$ and $R(550)$ represent the in-plane retardation of the oriented polymer film at wavelengths of 450 nm and 550 nm, respectively, and $K(450)$ and $K(550)$ are the values calculated by $K = [n_z - (n_x + n_y)/2] \times d$ (where n_x, n_y and n_z represent the three-dimensional refractive indexes of the oriented polymer film as the refractive indexes in the direction of the x-axis, y-axis and z-axis, respectively, and d represents the thickness of the film) for the oriented polymer film at a wavelength of 450 nm and 550 nm, respectively.

2. A retardation film according to claim 1, wherein the retardation at wavelengths of 450 nm, 550 nm and 650 nm satisfies the following formulae (3) and (4):

$$0.6 < R(450)/R(550) < 0.97 \qquad (3)$$
$$1.01 < R(650)/R(550) < 1.4 \qquad (4)$$

where $R(650)$ represents the in-plane retardation of the oriented polymer film at a wavelength of 650 nm.

3. A retardation film according to claim 1 or 2, wherein the retardation is smaller with a shorter wavelength in the wavelength range of 400-700 nm.

4. A retardation film according to claim 1, which comprises an oriented polymer film wherein

(1) the film is composed of a polymer comprising a monomer unit of a polymer with positive refractive index anisotropy (hereunder referred to as "first monomer unit") and a monomer unit of a polymer with negative refractive index anisotropy (hereunder referred to as "second monomer unit"),

(2) $R(450)/R(550)$ for the polymer based on

said first monomer unit is smaller than R(450)/R(550) for the polymer based on said second monomer unit, and

(3) the film has positive refractive index anisotropy.

5. A retardation film according to claim 1, which comprises an oriented polymer film wherein

(1) the film is composed of a polymer comprising a monomer unit that forms a polymer with positive refractive index anisotropy (hereunder referred to as "first monomer unit") and a monomer unit that forms a polymer with negative refractive index anisotropy (hereunder referred to as "second monomer unit"),
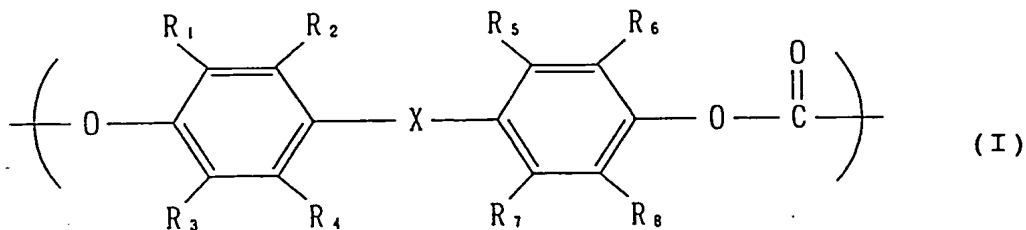
(2) R(450)/R(550) for the polymer based on said first monomer unit is larger than R(450)/R(550) for the polymer based on said second monomer unit, and

(3) the film has negative refractive index anisotropy.

6. A retardation film according to claim 1, wherein said oriented polymer film is made of a polymer material with a glass transition temperature of 120°C or higher.

7. A retardation film according to claim 1, wherein said oriented polymer film contains a polycarbonate with a fluorene skeleton.

8. A retardation film according to claim 1, which is an oriented polymer film comprising copolymer and/or blend of polycarbonates in which 30-90 mole percent of the total consists of a repeating unit represented by the following general formula (I):

$$\left(\!\!-O-\!\!\underset{R_3\quad R_4}{\overset{R_1\quad R_2}{\bigcirc}}\!\!-X-\!\!\underset{R_7\quad R_8}{\overset{R_5\quad R_6}{\bigcirc}}\!\!-O-\overset{\overset{O}{\|}}{C}-\!\!\right) \tag{I}$$

where R_1-R_8 are each independently selected from among hydrogen, halogen atoms and hydrocarbon groups of 1-6

carbon atoms, and X is

$$-\overset{\displaystyle C}{\underset{\displaystyle }{|}}-$$
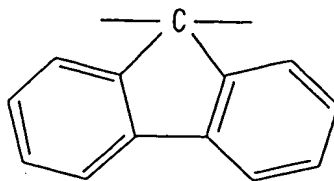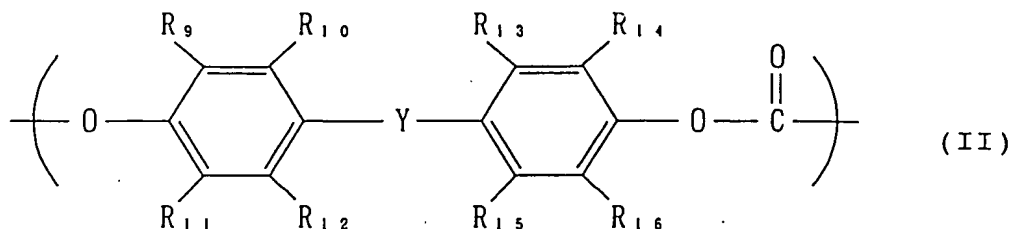
and 70-10 mole percent of the total consists of a
repeating unit represented by the following general
formula (II):

$$\left(\!-O-\!\!\left\langle\!\!\begin{array}{c}R_9 \quad R_{10}\\ \\ R_{11}\quad R_{12}\end{array}\!\!\right\rangle\!\!-Y-\!\!\left\langle\!\!\begin{array}{c}R_{13}\quad R_{14}\\ \\ R_{15}\quad R_{16}\end{array}\!\!\right\rangle\!\!-O-\overset{\displaystyle O}{\overset{\displaystyle \|}{C}}-\!\right) \qquad (II)$$

where R_9-R_{16} are each independently selected from among
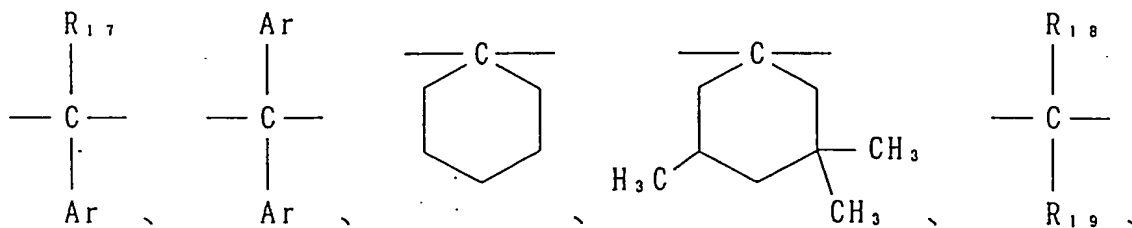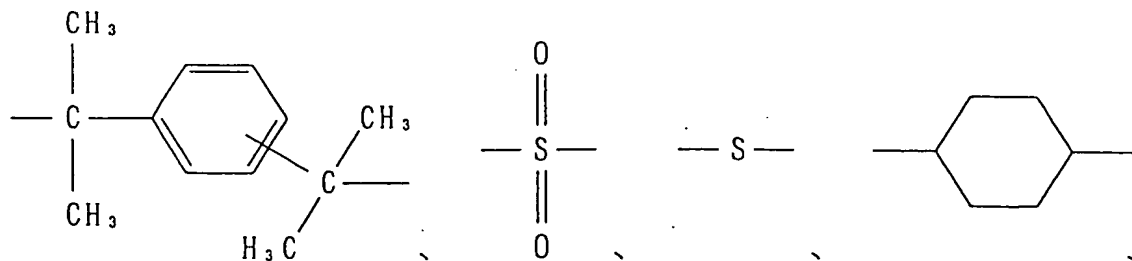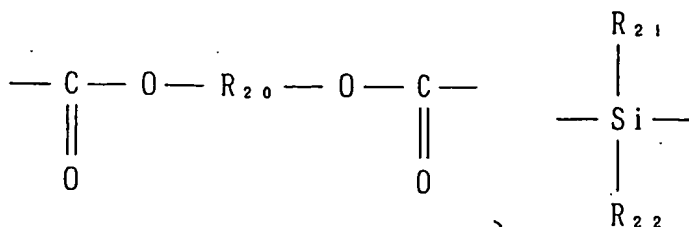hydrogen, halogen atoms and hydrocarbon groups of 1-22
carbon atoms, and Y is

$$-\overset{\displaystyle R_{17}}{\underset{\displaystyle Ar}{|}}\overset{\displaystyle |}{C}- \quad , \quad -\overset{\displaystyle Ar}{\underset{\displaystyle Ar}{|}}\overset{\displaystyle |}{C}- \quad , \quad \text{(cyclohexyl)} \quad , \quad \text{(dimethyl cyclohexyl)} \quad , \quad -\overset{\displaystyle R_{18}}{\underset{\displaystyle R_{19}}{|}}\overset{\displaystyle |}{C}-$$

$$-\overset{\displaystyle CH_3}{\underset{\displaystyle CH_3}{|}}\overset{\displaystyle |}{C}- \quad , \quad -\overset{\displaystyle O}{\overset{\displaystyle \|}{\underset{\displaystyle \underset{\displaystyle O}{\|}}{S}}}- \quad , \quad -S- \quad , \quad \text{(cyclohexylene)}$$

$$-\overset{\displaystyle }{\underset{\displaystyle O}{\|}}C-O-R_{20}-O-\overset{\displaystyle }{\underset{\displaystyle O}{\|}}C- \quad , \quad -\overset{\displaystyle R_{21}}{\underset{\displaystyle R_{22}}{|}}\overset{\displaystyle |}{Si}-$$

or $-R_{23}-$,

where in Y, $R_{17}-R_{19}$, R_{21} and R_{22} are each independently selected from among hydrogen, halogen atoms and hydrocarbon groups of 1-22 carbon atoms, R_{20} and R_{23} are selected from among hydrocarbon groups of 1-20 carbon atoms, and Ar is selected from among aryl groups of 6-10 carbon atoms.

9.   A retardation film according to claim 8, which is an oriented polymer film comprising copolymer and/or blend of polycarbonates in which 35-85 mole percent of the total consists of a repeating unit represented by the following general formula (III):
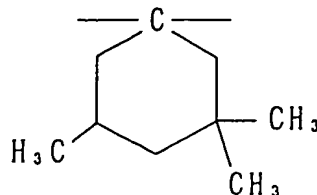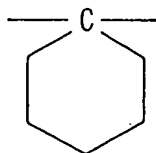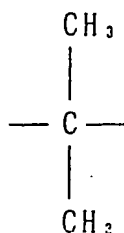

(III)
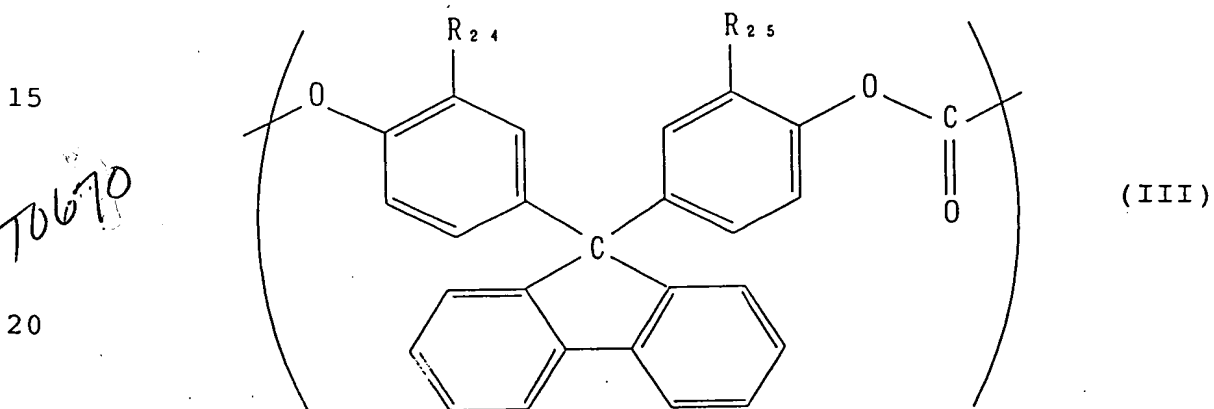
where R_{24} and R_{25} are each independently selected from among hydrogen and methyl,
and 65-15 mole percent of the total consists of a repeating unit represented by the following general formula (IV):

(IV)
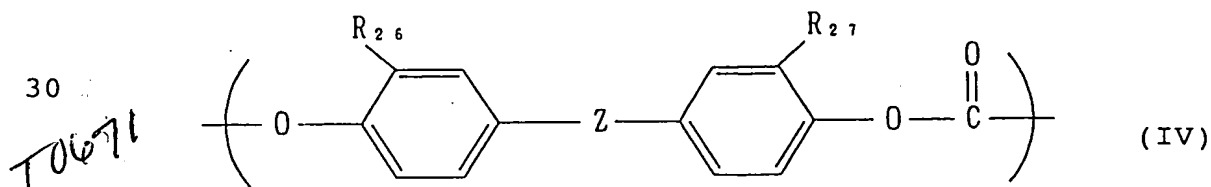
where R_{26} and R_{27} are each independently selected from among hydrogen and methyl,
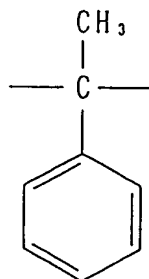and Z is selected from among

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$$\begin{array}{c} CH_3 \\ | \\ -C- \\ | \\ CH_3 \end{array}$$

（structures: cyclohexylidene —C— ring; and trimethyl cyclohexylidene —C— ring with H₃C, CH₃, CH₃）

or

10

$$\begin{array}{c} CH_3 \\ | \\ -C- \\ | \\ C_6H_5 \end{array}$$

15   10.   A retardation film according to claim 5, which
is a blended oriented polymer film in which said polymer
with positive refractive index anisotropy is poly(2,6-
dimethyl-1,4-phenyleneoxide) and said polymer with
negative refractive index anisotropy is polystyrene,
20 wherein the polystyrene content is from 67 wt% to 75 wt%.

11.   A retardation film according to claim 1,
wherein the b* value representing the object color is 1.3
or smaller.

12.   A retardation film according to claim 1, which
25 is a λ/4 plate.

13.   A retardation film according to claim 1, which
is a λ/2 plate.

14.   A retardation film according to claim 12 or 13,
wherein R(550) ≥ 90 nm.

30   15.   A laminated retardation film prepared by
laminating a λ/4 plate and a λ/2 plate, wherein both the
λ/4 plate and λ/2 plate are a retardation film according
to claim 1.

16.   A laminated retardation film according to claim
35 15, wherein the angle formed between the optical axes of

the λ/4 plate and λ/2 plate is in the range of 50°-70°.

     17. A circular polarizing plate or elliptical polarizing plate prepared by laminating a polarizing plate with a retardation film according to claim 1.

5   18. A circular polarizing plate or elliptical polarizing plate prepared by laminating a reflective polarizing plate with a retardation film according to claim 1.

     19. A circular polarizing plate or elliptical polarizing plate prepared by laminating a polarizing plate with a retardation film according to claim 1 and a reflective polarizing plate.

     20. A circular polarizing plate or elliptical polarizing plate according to claim 18 or 19, wherein said reflective polarizing plate has a function of reflecting only circularly polarized light rotated in one direction.

     21. A circular polarizing plate or elliptical polarizing plate according to claim 20, wherein said reflective polarizing plate is composed of a cholesteric liquid crystal polymer.

     22. A liquid crystal display device provided with a retardation film according to claim 1.

     23. A liquid crystal display device according to claim 22, which is a reflective liquid crystal display device.

     24. A liquid crystal display device according to claim 22, wherein said retardation film is a viewing angle compensating plate.

     25. A retardation film which is a retardation film comprised of a single polycarbonate oriented film, wherein the retardation at wavelengths of 450 nm and 550 nm satisfies the following formula (1):

$$R(450)/R(550) < 1 \qquad\qquad (1)$$

where R(450) and R(550) represent the in-plane retardation of the oriented polymer film at wavelengths of 450 nm and 550 nm, respectively,

and R(550) is at least 50 nm.

26. A reflective liquid crystal display device provided with a polarizing plate, a λ/4 plate and a liquid crystal cell containing a liquid crystal layer between two substrates with transparent electrodes in that order, the reflective liquid crystal display device employing as the λ/4 plate a retardation film comprising a single oriented polycarbonate film, wherein the retardation at wavelengths of 450 nm and 550 nm satisfies the following formula (1):

R(450)/R(550) < 1   (1)

where R(450) and R(550) represent the in-plane retardation of the oriented polymer film at wavelengths of 450 nm and 550 nm, respectively, and R(550) is 100-180 nm.